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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,454	06/01/2001	Stephen A. Bowling	18153.0054	8458
23517	7590	09/21/2004	EXAMINER	
SWIDLER BERLIN SHEREFF FRIEDMAN, LLP			WANG, TED M	
3000 K STREET, NW			ART UNIT	
BOX IP			PAPER NUMBER	
WASHINGTON, DC 20007			2634	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/870,454

Applicant(s)

BOWLING, STEPHEN A.

Examiner

Ted M Wang

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/1/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-6 are pending in the application.

Drawings

2. The drawings are objected to because
 - The drawing should label all the elements in the figures. In Fig.2 212 should be labeled as Driver circuit.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. Figure 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:
 - Page 8 line 3 "125" should be changed to "150".
 - Page 15 line 8 "407 and 407" should be changed to "407 and 408".

Appropriate correction is required.

Double Patenting

5. Claim 5 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 3. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Objections

6. Claim 6 is objected as being of improper depending on the objected claim 5.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reents et al. (US5,561,384) in view of the admitted prior art of the instant application.

- In regard claim 1, Reents et al. discloses Input/output driver circuit for isolating with minimal power consumption a peripheral component from a processor core

section having outputs that are configured to operate based on configuration bits when outputs are not enabled, comprising:

output control logic (Fig.4 elements 503, 507, and 508-510, and column 10 line 64-67, column 11 lines 1-62);

configuration bits for selectively configuring output control logic (Fig.4 elements 203, 503 input, 507 input, force term, and column 10 line 64 – column 11 line 62); and

an output transistor pair having upper and lower transistors (Fig.4 elements 500 and 505) that are respectively coupled to opposing output voltage levels (column 10 line 64 – column 11 line 38);

the configuration bits causing the output control logic to configure the output pair to operate in one of a tri-state, active high or active low mode when the pair is not enabled (column 10 line 64 – column 11 line 62) except specifically teaching that the processor contains PWM module.

The admitted prior art of the instant application teaches that a PWM module and hardware drive device in a processor having incorporated tri-state output buffers (page 1 line 16 – page 2 line 22, Fig.4 elements 400 and 405, and page 14 line 15 – page 15 line 17) for controlling power so as to reduce the cost of the processor.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Reents' processor (integrated circuit) to include the PWM

module in view of the admitted prior art of the instant application's teaching in order to reduce the cost of the processor.

- In regard claim 2, the limitation that the configuration bits include a tri-state control bit that configures the output pair to operate in one of a tri-state or an active mode can further be taught by Reents in Fig.4 elements 203, force term, and column 10 line 64 – column 11 line 62.
- In regard claim 3, the limitation that the configuration bits include a high device set bit that configures the output pair to operate in one of an active high or an active low mode when the tri-state control bit configures the output pair to operate in an active mode can further be taught by Reents in Fig.4 elements 203, 503 input, 507 input, force term, and column 10 line 64 – column 11 line 62.
- In regard claim 4, the limitation that the output pair outputs a signal to an external device in a high arrangement can further be taught by Reents in Fig.4 elements 500-506 and column 10 line 64 – column 11 line 15.

Conclusion

9. Reference US5,450,027 is cited because they are put pertinent to the Low-power-dissipation CMOS circuits. However, none of references teach detailed connection as recited in claim.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M Wang whose telephone number is (571) 272-3053. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Ted M Wang
Examiner
Art Unit 2634

Ted M. Wang



SHUWANG LIU
PRIMARY EXAMINER